REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-15 are pending in the present application.

In the outstanding Office Action, the specification was objected to for not capitalizing the trademarks NETSCAPE NAVIGATION and INTERNET EXPLORER; Claims 1-3, 5, 7, and 9-13 were rejected under U.S.C. § 103(a) as being unpatentable over Ohno et al. (U.S. Patent No. 6,034,962, hereinafter Ohno) in view of Lakshman et al. (U.S. Patent No. 6,078,564, hereinafter Lakshman); and Claims 4, 6, 8, 14, and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohno and Lakshman as applied to Claims 1, 3, 5, and 13 above, and further in view of Ghani et al. (U.S. Patent No. 6,215,769, hereinafter Ghani).

The specification has been amended to capitalize NETSCAPE NAVIGATION and INTERNET EXPLORER as suggested on page 2, lines 3-9 of the outstanding Office Action. It is respectfully submitted that no new matter has been added.

Briefly recapitulating, Claim 1 recites a communication device using a communication protocol with data loss compensation functions provided at both an upper layer and a lower layer including a packet storage unit, a connection identification unit, a transmission state management unit, a packet transmission unit, and a packet transmission order control unit. More specifically, the packet transmission order control unit is configured to control the transmission order among the plurality of packets to be transmitted by the packet transmission unit "such that when the packet storage unit stores at least one non-transmitted packet for each one of at least two different upper layer connections, at least two packets to be transmitted by the packet transmission unit consecutively are belonging to

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different upper layer connections." Therefore the packet transmission order control unit functions such that a plurality of packets belonging to the same upper layer connection are not consecutively transmitted. Independent Claims 11 and 12 recite similar features as discussed above with respect to Claim 1.

Further, the packet transmission order control unit of Claim 13 is configured "such that a level of continuity of packets belonging to each upper layer connection in the transmission order becomes not higher than a level of continuity of packets belonging to each upper layer connection in a storing order by which the plurality of packets are stored in the packet storage unit." Thus, the packet transmission order control unit of Claim 13 is structured such that the number of successive packets belonging to the same upper layer connection and the occurrence frequency of the successive packets in the transmission order are smaller than the number of the successive packets in the storing order in the storage unit.

Ohno describes a method of increasing the network use efficiency of computer communication and reducing the byte stream limitation in a transmit/receive request.[1] By returning an acknowledgement in a unit of request, any vain acknowledgement can be avoided even in the case of asynchronous transmission/reception, a request which is completed can be ended immediately, thus permitting efficient data transfer.[2] However, as noted in the outstanding Office Action at page 3, line 15 to page 4, line 4, Ohno lacks the packet transmission control unit as recited in Claims 1, 11, and 12 as discussed above.

Lakshman describes an improved method for transporting data over the Internet transfer protocol.[3] More specifically, Lakshman describes a scheduler 300 that services multiples queues 151(a)-(n) as shown in Figure 3, by selecting a packet from a particular

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[1] Ohno, Abstract.
[2] Ohno, Abstract.
[3] Lakshman, col. 1, lines 11-15.

queue to be transmitted according to transmission management policies such as fair-weighted queuing.[4] However, Lakshman merely indicates that there are a plurality of queues each preferably corresponding to each upper layer connection and does not describe that packets regarding transmission requests and their respective queues are not transmitted in the arrangement order within the queues. Thus, Lakshman fails to teach or suggest the packet transmission order control unit of Claims 1, 11, and 12 that is configured to control a transmission order among a plurality of packets to be transmitted by the packet transmission "such that when the packet storage unit stores at least one non-transmitted packet for each one of the at least two different upper layer connections, at least two packets to be transmitted by the packet transmission unit consecutively are belonging to different upper layer connections." Accordingly, Lakshman does not teach or suggest that a plurality of packets belonging to the same upper layer connection are not consecutively transmitted, thereby realizing a communication device and communication control method which is capable of suppressing the wasteful execution of the data loss compensation function at the upper layer even when the transmission delay is increased by the data loss compensation function at the lower layer.[5]

Further, Lakshman discloses in Figure 3 that the plurality of queues 151a-n has a given number of spaces to store packets in the queue. However, Lakshman fails to disclose the packet transmission order control unit of Claim 13 configured such that "a level of continuity of the packets belonging to each upper layer connection in the transmission order becomes not higher than a level of continuity of packets belonging to each upper layer connection in a storing order by which the plurality of packets are stored in the packet storage

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[4] Lakshman, col. 5, lines 32-62.
[5] Applicant's specification, page 27, lines 26-34.

unit." Thus, <u>Lakshman</u> also fails to teach or suggest the packet transmission order control

unit recited in Claim 13.

Accordingly, it is respectfully submitted that neither <u>Ohno</u> nor <u>Lakshman</u>, either alone

or in any proper combination, teach or suggest the features discussed above with respect to

independent Claims 1, 11, 12, and 13. Further, the <u>Ghani</u> reference has also been considered

but fails to cure the deficiencies of <u>Ohno</u> and <u>Lakshman</u> as discussed above with respect to

independent Claims 1, 11, 12, and 13. Therefore, it is respectfully requested that the rejection

to Claims 1, 11, 12, and 13 under 35 U.S.C. § 103(a) be withdrawn. Likewise, it is

respectfully submitted that dependent Claims 2-10, 14, and 15 that depend from independent

Claims 1 and 13 are allowable at least because of their dependent recitation of the above-

identified features of independent Claims 1 and 13 from which they depend. Therefore, it is

also respectfully requested that the rejection to Claims 2-10, 14, and 15 under 35 U.S.C. §

103(a) also be withdrawn.

Consequently, in light of the above discussion, the application is believed to be in

condition for formal allowance. An early and favorable action to that effect is respectfully

requested.

Respectfully submitted,

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